



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

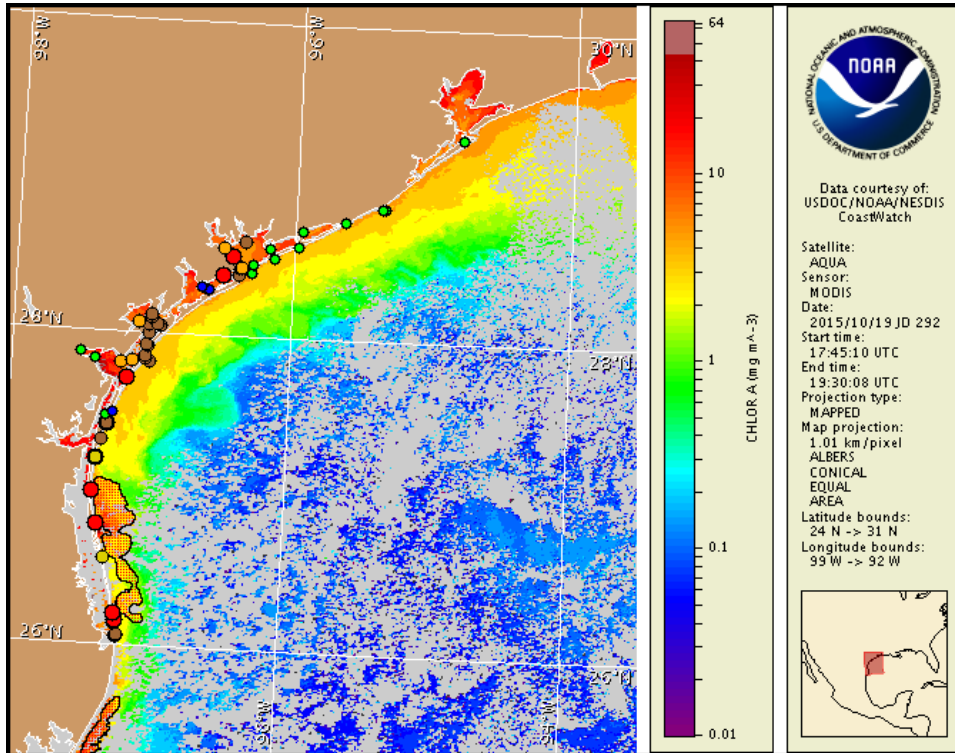
Thursday, 22 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 19, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 12 to 21: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast from Galveston Bay to the Rio Grande. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, October 22 through Monday, October 26 is listed below:

Region: Forecast (Duration)

Bay region-Matagorda Bay: High (Th-M)

Bay region-San Antonio Bay to Espiritu Santo Bay: High (Th-M)

Bay region-Aransas Bay: High (Th-Su), Moderate (M)

Bay region-Corpus Christi Bay: High (Th-M)

Aransas Pass to PINS region: High (Th-Su), Very low (M)

Bay region-Upper Laguna Madre: High (Th-Su), Moderate (M)

Padre Island National Seashore region: High (Th-Su), Low (M)

Bay region-Lower Laguna Madre to Laguna Vista: High (Th-M)

Mansfield Pass to Beach Access 6 region: High (Th-Su), Low (M)

Beach Access 6 to Rio Grande region: High (Th-Su), Low (M)

All Other Texas Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and discolored water have been reported in Corpus Christi Bay and Matagorda Bay.

Analysis

Karenia brevis concentrations range from 'very low' to 'high' from the Matagorda Peninsula to the Rio Grande, with the highest concentrations collected along the coast of South Padre Island at Beach Access Road 5 (TPWD; 10/20-21). Within the Aransas Bay region, the Imaging FlowCytobot at UTMSI Pier in Port Aransas continues to observe *K. brevis* ranging between 'very low' to 'low' concentrations (TPWD, TAMU; 10/19-22). In the Corpus Christi Bay region, no new samples were collected but discolored water continues to be reported (TPWD; 10/19). Sampling in the Lower Laguna Madre continues to indicate 'very low' to 'medium' *K. brevis* concentrations (TPWD; 10/20-21). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>.

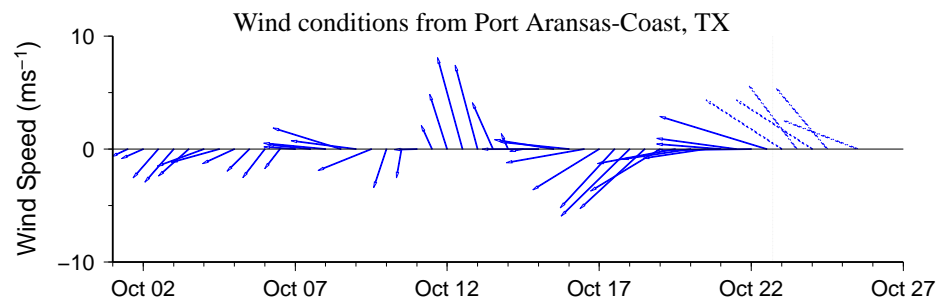
For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (10/19, shown left and 10/20 not shown) shows a band of elevated chlorophyll (2 to 4 $\mu\text{g/L}$) stretching alongshore Texas coast from the Matagorda Peninsula region to Mustang Island. Patches of elevated to very high chlorophyll (2 to >20 $\mu\text{g/L}$) are present along- and offshore the Texas and Mexico coast from Padre Island National Seashore to 380 km south of Rio Grande.

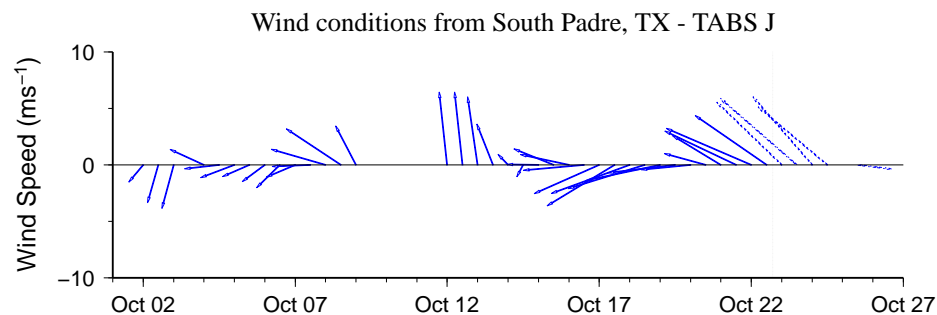
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 110 km south from Pass Cavallo, 70 km south

from the Port Aransas region, and 10 km north from Brazos Santiago Pass from October 19 to October 25.

Yang, Davis



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

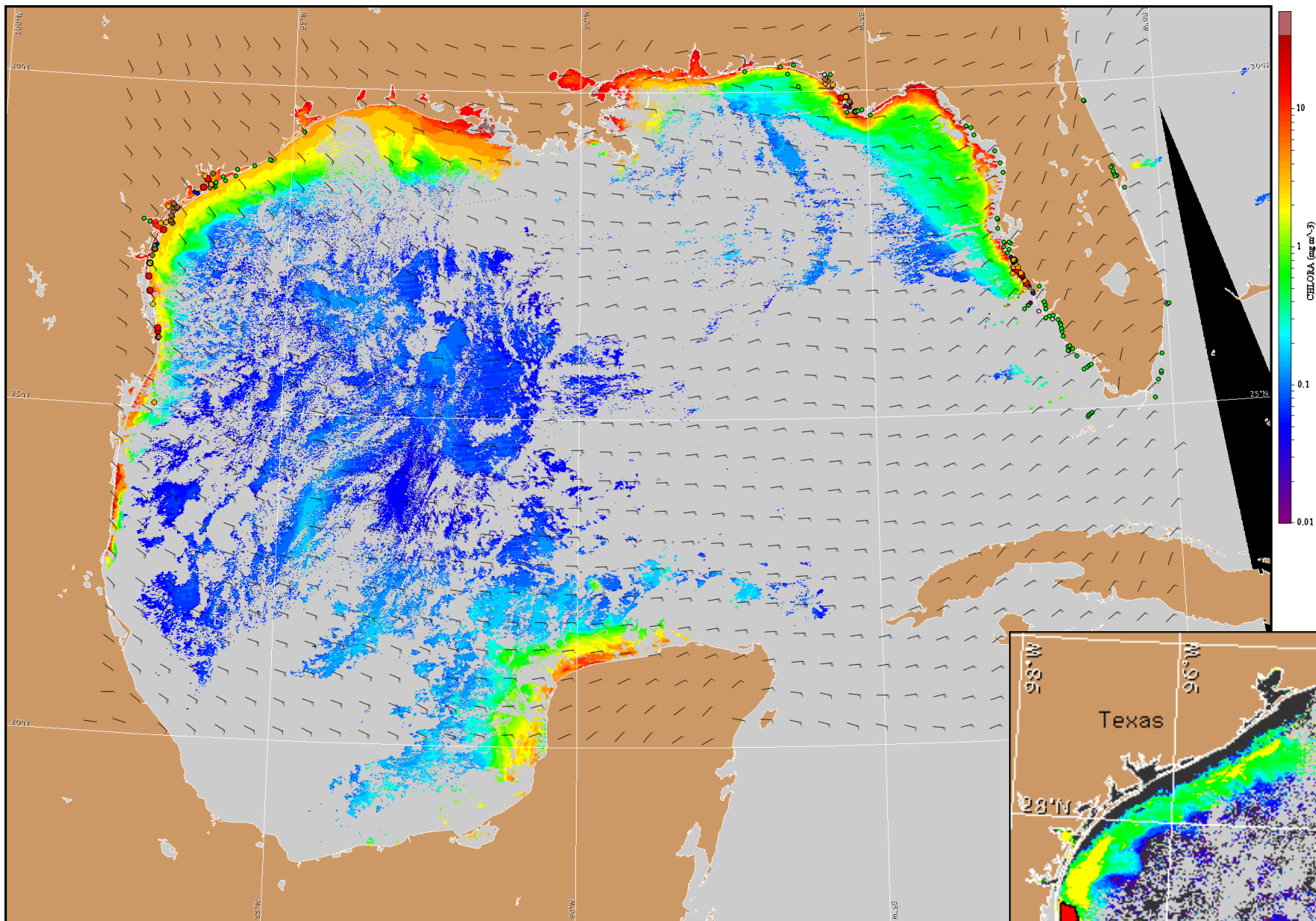


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Wind Analysis

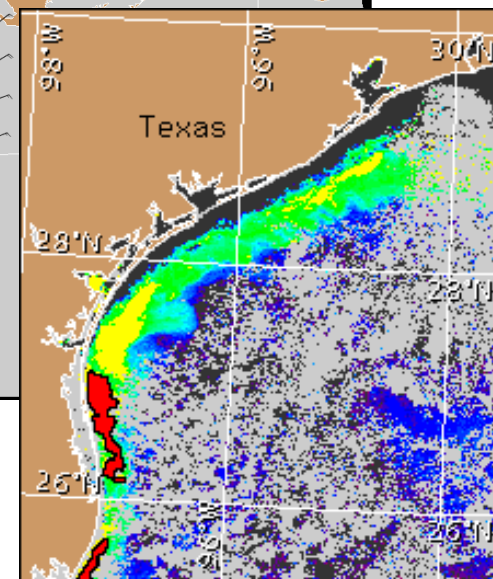
Port Aransas to Baffin Bay: Southeast winds (10-20kn, 5-10m/s) today through Saturday. East winds (15-20kn, 8-10m/s) Saturday night through Sunday. North to northwest winds (10-20kn) Sunday night through Monday.

Port Mansfield to the Rio Grande: Southeast winds (12-21kn, 6-11m/s) today through Saturday. North winds (16-21kn, 8-11m/s) Sunday. Northwest winds (14-19kn, 7-10m/s) Monday.



Satellite chlorophyll image and forecast winds for October 23, 2015 12Z with points representing cell concentration sampling data from October 12 to 21: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).